



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,279	09/19/2003	William W. Rowley	39288-0129	.2278

24115 7590 06/29/2005

BUCKINGHAM, DOOLITTLE & BURROUGHS, LLP  
50 S. MAIN STREET  
AKRON, OH 44308

EXAMINER

MACARTHUR, VICTOR L

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/605,279		ROWLEY ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Victor MacArthur		3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 39-45 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-38 is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/18/03, 11/20/03</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3679

**DETAILED ACTION**

***Product/Process of Use***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-38, drawn to a connector, classified in class 403, subclass 349.
- II. Claims 39-45, drawn to method of using connector, classified in class 29, subclass 592.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I as claimed and Group II as claimed are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the connector of claim 1 could be used in a process other than that of claim 39. For instance, a connector as set forth by claim 1 could be used with bolts (instead of with tubes).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the response to this requirement to be complete must include an election of a single invention to be examined even though the requirement be traversed.

During a telephone conversation with Louis Wagner on 6/15/2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 39-45 are

Art Unit: 3679

withdrawn from further consideration by the examiner as being drawn to a non-elected invention in accordance with 37 CFR 1.142(b).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation "the collar s narrower than the width of the tube" (lines 4-5 of claim 18) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Note that figure 2 shows that the collar (68) is actually wider than the tube (28).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

Art Unit: 3679

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 1 and 6 are objected to because of the following informalities:

- The phrase "the central bore" (line 7 of claim 1) lacks proper antecedent basis and should be replaced with --a central bore--.
- The phrase "the aperture" (line 1 of claim 6) lacks proper antecedent basis and should be replaced with --an aperture--.

Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-29 rejected under 35 U.S.C. 102(b) as being anticipated by Kleuver (U.S. Patent 4,477,109).

Art Unit: 3679

Claim 1. Kleuver (figs.1-3) discloses a connecting fastener comprising a cylindrical base (16) having a central base (central portion of 16) disposed therein, including a first end (top end of 16) and a second end (bottom end of 16) and a base wall (outer wall of 16), the base wall having a partial gap (within 16) disposed therein; at least one projection (49) extending from an inner surface of the wall into a central bore (central bore of 16) proximate the first end of the base; a cylindrical collar (14) having an central base (central portion of 14) disposed therein and a first end (top end of 14) disposed proximate the second end of the base, and a collar wall (wall of 14), the collar wall having a gap (portion of 20 within 14); and a shoulder (40) connected to and extending between the second end of the base and the first end of the collar along at least a portion of a respective circumference of the base and the collar.

Claim 2. Keuver discloses that the at last one projection extending from the inner surface of the wall of the base includes two inwardly extending projections.

Claim 3. Keuver discloses that the projections are opposed **about** (but not necessarily exactly) a diameter of the bore of the base (emphasis added).

Claim 4. Keuver discloses that the at least one projection extends along a portion of an inner circumference of the base.

Claim 5. Keuver discloses that the at least one projection includes at least one of a ramp surface (surface receiving 55), a stopping wall (54), a retaining wall (inner face of 49) and a locking surface (surface of 54).

Claim 6. Keuver discloses an aperture (20) defined in the wall of the base that is of a sufficient width to allow a sealing surface on a tube to pass through.

Art Unit: 3679

Claim 7. Keuver discloses that the aperture is defined in the wall of the base at the second end of the base and extends toward the first end of the base.

Claim 8. Keuver discloses that the wall of the base further comprises ribs on its outer surface (on outer surface of 45 as described in col.3, ll.43-44).

Claim 9. Keuver discloses that an outer diameter of the collar is less than an outer diameter of the base.

Claim 10. Keuver discloses that an outer diameter (tapered lower portion of 14) of the collar is less than an inner diameter of the base.

Claim 11. Keuver discloses that the gap defined in the wall of the collar extends parallel to a longitudinal axis of the collar from the first end of the collar to the second end of the collar and is of a width sufficient to allow a tube to be inserted through the gap with the application of force.

Claim 12. Keuver discloses that a pair of opposing wings (65) project from the outer surface of the collar and extend (for some distance) parallel to the longitudinal axis of the collar between the first and second ends of the collar.

Claim 13. Keuver discloses (figs.1-3) a connecting fastener, comprising a hollow cylindrical body (16), which includes: a base (45) that includes a first end (top end of 45) a second end (bottom end of 45) and defines a first central bore (portion of 20 within 45); at least one projection (49), extending from an inner surface of the base into the first central bore proximate the first end of the base; a cylindrical collar (14) that includes a first end (top end of 14) disposed proximate the second end of the base and defines a second central bore (portion of 20 within 14); and a shoulder (40) connected to and extending between the second end of the

Art Unit: 3679

base and the first end of the collar along at least a portion of the circumferences of the base and the collar; and an aperture (portion of 20 extending through 16 and 14) defined in the cylindrical body, extending about a portion of the body from an area near the first end of the base and through the collar, wherein the width of the aperture at the base of the body is greater than the width of the aperture at the collar.

Claim 14. Keuver discloses that the outer diameter of the collar is less than the outer diameter of the base.

Claim 15. Keuver discloses that the at least one projection extending from an inner surface of the base includes at least two projections (49).

Claim 16. Keuver discloses that the at least two projections are opposed about the diameter of the bore of the base.

Claim 17. Keuver discloses that the at least one projection includes at least one of a ramp surface (surface receiving 55), a stopping wall (54), a retaining wall (inner face of 49) and a locking surface (surface of 54).

Claim 18. Keuver discloses that the width of the aperture defined in the cylindrical body at the base is sufficient to allow a sealing surface on a tube to pass through, and at the collar is narrower than the width of the tube (e.g. a tube of non-uniform diameter).

Claim 19. Keuver discloses a pair of opposing wings, wherein each wing projects from the outer surface of the collar and extends (for some distance) parallel to the longitudinal axis of the collar along the length of the collar.

Claim 20. Keuver discloses (figs.1-3) a fastening connection, comprising: a connector member, including: a cylindrical base (45) that includes a first end (top end of 45), a second end



Art Unit: 3679

(bottom end of 45) and a wall (wall of 45), and defines an aperture (portion of 20 within 45) in the wall and a central bore (portion of 20 within 45 40 and 14); at least two uniformly spaced projections (49), extending from an inner surface of the wall into the central bore proximate the first end of the base; a cylindrical collar (14) that includes a wall (wall of 14) and a first end (top end of 14) disposed proximate the second end of the base, defines a central bore (bore within 14) and defines a gap in the wall (gaps between ribs, col.3, ll.43-44); and a shoulder (40) connected to and extending between the second end of the base and the first end of the collar along at least a portion of the respective circumferences of the base and the collar; and a receiving member (15), including: a cylindrical body (cylindrical body of 15) that includes a first end (top end of 15), a second end (bottom end of 15) and an outer diameter that is less than the distance between the at least two uniformly spaced projections on the base of the connector member across the central bore of the connector member (as seen in fig.8); means (48) to secure at least a portion of the body of the receiving member to the connector member.

Claim 21. Keuver discloses that the means to secure at least a portion of the body of the receiving member to the connector member include at least two opposing tabs (48) projecting from the outer surface of the cylindrical body near the first end of the body.

Claim 22. Keuver discloses that there are two uniformly spaced projections on the receiving member and each projection includes a locking surface (55) that engages a corresponding tab (tab portion of 49) of the receiving member.

Claim 23. Keuver discloses that the securing of the receiving member to the connector member is effectuated with a turn of the connector member that is **approximately** (though not

Art Unit: 3679

necessarily exactly) one-quarter of the circumference of the outer circumference of the base of the connector member (emphasis added).

Claim 24. Keuver discloses that the outer diameter of the wall of the collar is less than the outer diameter of the wall of the base.

Claim 25. Keuver discloses that the projections are opposed about the central bore of the cylindrical base.

Claim 26. Keuver discloses that the width of the aperture in the wall of the cylindrical base is sufficient to allow a sealing surface on a tube to pass through the aperture.

Claim 27. Keuver discloses that the aperture is defined in the wall of the base at the second end of the base and extends toward the first end of the base.

Claim 28. Keuver discloses that the gap in the wall of the cylindrical collar extends parallel to the longitudinal axis of the collar along the length of the collar and is of a width sufficient to allow a corresponding tube to be inserted through the gap with an application of force.

Claim 29. Keuver discloses a pair of opposing wings (65) projecting from the outer surface of the collar and extending parallel to the longitudinal axis of the collar along the length of the collar.

***Allowable Subject Matter***

Claims 30-38 are allowed. Regarding claim 30:

- Keuver (U.S. Patent 4,477,109) discloses a fastened tubing connection, comprising: a tube (11), including: a shaft (shaft of 11) with an operational end (top end of 11); and a

Art Unit: 3679

- sealing surface (surface of 11 contacting 14) on the shaft proximate the operational end, wherein the sealing surface includes a shoulder (tip of 11); a connector member (16), including a cylindrical base (45) that includes a first end (top end of 45), a second end (bottom end of 45) and a wall (wall of 45), and defines an aperture (20) in the wall and a first central bore (portion of 20 within 45); at least two uniformly spaced projections (49), extending from an inner surface of the wall into the first central bore proximate the first end of the base; a cylindrical collar (14) that includes a first end (top end of 14) disposed proximate the second end of the base and a wall (wall of 14) with an outer diameter that is less than the outer diameter of the wall of the cylindrical base, wherein the wall defines a gap (gaps between ribs, col.3, ll.43-44) and the collar defines a second central bore (portion of 20 within 14); and a shoulder (40) connected to and extending between the second end of the base and the first end of the collar along at least a portion of the respective circumferences of the base and the collar; a receiving member (15), including: a cylindrical body (cylindrical body of 15) that includes a first end (top end of 15), a second end (bottom end of 15) and an outer diameter (outer diameter of 15 received in 45) that is less than the distance between the at least two uniformly spaced projections on the base of the connector member across the diameter of the first central bore, and defines a third central bore (portion of 20 within 15); and means (48) to engage at least a portion of the body of the receiving member in the first central bore
- The applicant's admitted prior art (fig.1) discloses a sealing surface (surface of 14) of a tube (12) that passes through an aperture (opening in right side of 16) in the base (16) of a connector member into a first central bore (bore of 16).

Art Unit: 3679

- Dallman (U.S. Patent 2,931,264) discloses the shaft of a bolt (26) passing through a gap (33) in a nut (30).
- None of the prior art discloses or suggests the shaft of the tube below a bevel passing through the gap in the collar to the second central bore, allowing the shoulder of the sealing surface to contact an end surface of the collar at the first end of the collar of the connector member, the receiving member securing the shoulder and end surface in contact with one another by receiving the operational end of the shaft in the third central bore and contacting the taper of the bevel while the means to engage the receiving member in the first central bore are engaged.

Claims 31-38 depend from claim 30 and are thus similarly allowed.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Referring to fastening connections:

Fortin U.S. Patent 1,490,771

Carter U.S. Patent 4,226,164

Angelis U.S. Patent 3,679,237

Schwartz U.S. Patent 4,305,180

Williamson U.S. Patent 5,516,156

Rowley U.S. Patent 6,902,210

Art Unit: 3679

Haury U.S. Pub. 2002/0128607

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor MacArthur whose telephone number is (571) 272-7085.

The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

*VLM*

VLM

June 21, 2005



GREGORY J. BINDA  
PRIMARY EXAMINER